1/16/03 # What do you capture? (Input from classes 1-4)

Science

(Some questions to consider: what were expectations, were expectations met, what was use and application of conceptual models, how to designate areas which might need more in depth investigation...)

Now (during or right after event):

What conceptual model was being used (reasoning for warnings)

What were environmental expectations (checklist)?

If not, is there a science component that is not understood?

What tools, data sets (etc) did you use to analyze for your conceptual model?

Was a mesoanalyst used?

Were AWIPS procedures needed?

What was trigger point for warning?

What products were used to make decision?

How was workstation configured?

Archive data via WES

Save hand analysis, guidance (SPC,HPC)

Use a web-based form for collection of thought

Monitor Local News

Print radar products that led to warning decisions (As workload permits)

Good AWIPS Procedures: Put in master list; Share them between offices

Later **(for most keep it simple and short; a few in great depth for next training season)**

Standardized environmental analysis

Missed event analysis

Save case for WES display

Replay data for specific event analysis

Brief summary from duty staff

Model trends leading to event

Save data on CD from Archiver (for possible WES case development)

Which fields worked well? Which didn't? (Moved this in later section)

What do you capture?
Technology

(Some questions to consider are reliability, usefulness, places where it hurt or help, how to designate areas which might need more in depth investigation...)

Now (during or right after event)

How did software perform?
How did hardware perform?
How did communications perform?

Specifically:
Was NAWAS comms effective?
How was performance of

LSR Program
IFPS/GFE
SCAN
FFMP
Algorithms
WWA
WARNGEN
XNOW
CRS/digital NWR Equip./**CAFÉ/VIP**
Phones, **HAM radio, NAWAS**
Generator/**UPS**

How was performance of remote sensing systems

ALERT
IFLOWS
Gages
LARCS
ASOS
Profilers
Satellite
Radar/ Load Shedding
Other...etc

Later

AWIPS Performance - Did software slow down or speed up warning process?
Was adequate warning provided by SAME/tone alerts?

What do you capture?
Human Factors

(HFACS: Organizational, supervision, preconditions for unsafe acts, unsafe acts....some would include communication, coordination, fatigue, how to designate areas which might need more in depth investigation.....)

Now (during or right after event)

Was there adequate staffing? If not, was anybody called in during the event?
Was experience level used effectively? If not, why?
(Instead of above two, try to capture *impacts* of low/high skill or little/a lot of experience**)**
Was someone given OJT during event if needed?

Was fatigue an issue?
Were incorrect assessments made?
Log staffing assignments

Any distractions?
How was coordination with SPC?
EM's?
Interoffice?
Media
HAM
Were any breaks necessary?
Did forecaster X & Y get along? (Or how effective were team interactions?)
(Or were there conflicts and if so, why?)

Was coordinator able to keep up with events (distribution of duties/workload/etc)?
How was cross utilization of staff?
Was workload distribution adjusted, if needed?
How was intra-office communications?
- Did all have a clear understanding of roles?
- Storm reports distributed to relevant staff?
Were proactive calls made?
- All aware of warnings out?

How was sectorization utilized?
How long was radar operated by same forecaster?

Later

How was cross utilization of staff?
Training issues on any aspects of operations?
Any impact of alternative work schedules?
Issues with staggering management schedules?
How was pre-storm prep?
Calling people in, use of supernumeries, how effective was severe wx ops plan, who was in charge, how did shift transitions impact (effective of prior shift preparation?)

Are there any adjustments needed to severe weather operations plan?

If there were personality conflicts, how to resolve?

How did office design impact operations (workstations, phones in right place, ability to visually and verbally communicate, **including ergonomics aspects**)

Any issues need discussing regarding procedures, training for upgrades, update instructions

Was procedural policy or guidance readily available during the event?

Put duties/roles/responsibilities of each position on cards.

What do you Capture?
Event Summary

(Some questions to consider are the facts: what we did and when, data, stats, response, outcomes, how to designate areas which might need more in depth investigation...)

Now (during or right after event):

Archive of ALL Data - satellite, model, radar

***New with 5.2.2 - Write to DVD or CD for WES**

Printed copies of outlooks, watches, HWO, warnings, mesoscale discussions, statements, LSR's (all products that relate to event) Including warning worksheets

Archive of radar data
Archive of products issued
Archive Logs
Phone log (by each phone)
Spotter reports

Internet Sources: obs, non-NWS mesoscale data, storm damage information
Monitor local television: damage and dissemination

Later

Stats (POD,FAR,CSI, Lead time)
AWIPS Database archive
Interview (personal or by email) with each person involved in event on how things went(ASAP)
From shift leader: What was your SA?
Did what happened match conceptual model?
Was data (radar, satellite, model) helpful?
Fill out ATTACHMENT C form (or SIG OPS, etc)
Storm damage survey/ Develop Damage Survey kits
Response of Emergency Managers, media and other customers
Develop Intranet Event Summary
Delayed spotter reports via internet (home page) or email, clipping services
Collect other late verification
Whose responsibility is it to develop summary?
Make sure staff is able to meet goals
Newspaper clippings
Internet event summary - photos

****Did specific storms surprise you?**

- **Development speed**
- **Damage type reported**

How to go about this?
Implementation
Class 1(Jun 2002)

(Some questions: what is the purpose? when to implement, how (forms, web, interviews...), when do go in depth, who does short term data gathering and who does long term, how to share with staff...)

Purpose: Identify strengths/weaknesses of operations, equipment problems, and work-arounds

When to implement:
- At direction of WCM
- After significant events (severe, floods, winter wx, fire wx)

How to implement:
- Forms (paper logs, intranet)
- Archive AWIPS data on WES
- Interviews by management or 3rd party
- Each individual who worked the event supplies written evaluation of strengths and limitations of various aspects of event

Who saves data:
- SOO responsible for archiving
- WCM should request
- People on event "instinctively" saves or requests data

How to present findings to rest of staff: Short presentation by someone working the event or SOO (maybe via email attachment)

How to go about this?
Implementation
Class 2 (Jul 2002)

(Some questions: what is the purpose? when to implement, how (forms, web, interviews...), when do go in depth, who does short term data gathering and who does long term, how to share with staff...)

Purpose: **A tool to improve operations**

When to implement: **At direction of senior forecaster**
Can implement for any event

How to implement: **Gather data as quickly as possible**
Log email, conduct informal meeting

How to present findings: **Email, intranet, or binder meeting**

How to go about this?
Implementation
Class 3 (Sep 2002)

(Some questions: what is the purpose? when to implement, how (forms, web, interviews...), when do go in depth, who does short term data gathering and who does long term, how to share with staff...)

Purpose:

When to implement: **Every event, but different levels of detail for each**

How to implement: **Information must be easy to gather**

Use WES or AWIPS Screen capture, shift logs, voice recorders

Use automated archival as much as possible, otherwise, senior forecaster, WCM or SOO

How to present findings: **Information must be easy to present and present fast (time)**

How to go about this?
Implementation
Class 4 (Jan 2003)

(Some questions: what is the purpose? when to implement, how (forms, web, interviews...), when do go in depth, who does short term data gathering and who does long term, how to share with staff...)

Purpose: **To learn from cases you did well, not from just those where things didn't work out.**

When to implement: **Have HMTs archive Data to DVD. All data will be available all the time.**

How to implement: **Have coordinator make sure that data is assembled for the WCM.**
Have a voice recording device available.
Implement after events, good and bad.
Shift lead forecaster should initiate with WCM oversight (SOO for science issues)

How to present findings: **Leave data from recent event on WES, available immediately to all who want to go through the event.**

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